

**AMENDMENT**

Kindly amend the application, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as follows.

**IN THE SPECIFICATION:**

Kindly amend the specification, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel to read as follows:

Page 1, first paragraph, inserted in December 17, 2001 Preliminary Amendment, kindly rewrite as follows:

**RELATED APPLICATIONS**

This application is a continuation of U.S. application Serial No. 09/091,456, filed June 15, 1998 now U.S. Patent No. 6,331,330, which is the national phase application of PCT/GB96/03105 filed December 16, 1996, and claims priority from Great Britain applications 9525505.5, filed December 14, 1995, 96172483.1 filed August 16, 1996, and 9619146.5, filed September 13, 1996.

Page 5, fifth paragraph, kindly rewrite the paragraph thereat as follows:

However, none of these techniques has been found to provide good control of the stoichiometry, morphology, microstructure and properties of multicomponent oxide films and a relatively high growth rate and deposited area of a deposited film. Also, the CVD and PVD techniques tend to need expensive equipment and highly skilled technicians for effective operation.

Page 1, sixth paragraph, kindly rewrite the paragraph thereat as follows:

This invention provides a method of depositing a material onto a substrate, the method comprising the steps of:

feeding a material solution comprising one or more precursor compounds, a solvent and a pH-modifying catalyst to an outlet to provide a stream of droplets of the material solution;

generating an electric field to electrostatically attract the droplets from the outlet towards the substrate; and  
providing an increase in temperature between the outlet and the substrate.

Page 10, last paragraph, continuing onto page 11, please rewrite the paragraph thereat to read as follows:

The apparatus of Figure 4 is similar to that of Figure 1, except that a shaped substrate holder 104 projects towards the outlet 5 at either side of the substrate 14'. The substrate holder 104 is heated as before, and this heating serves to set up a temperature gradient whereby the ambient temperature increases as the substrate 14' is approached from the direction of the outlet 5. (The arrangement of Figure 1 also provided an increase in temperature approaching the substrate 14 from the direction of the outlet 5, but the arrangement of Figure 4, with the projecting parts of the substrate holder 104, provides a more gradual temperature gradient). This increased temperature and more gradual temperature gradient facilitates solvent evaporation and decomposition of the coating solution near the vicinity of the substrate that enables decomposition of the film.

Page 15, first full paragraph, please rewrite the paragraph thereat as follows:

There have been many investigations of  $\alpha$ -phase and  $\beta$ -phase crystal in PVDF film. It is well known that the  $\alpha$ -phase crystal is more stable than the  $\beta$ -phase crystal. The reason why the  $\beta$ -phase crystal was formed in spite of its instability was not clear. In the present case of ESAVD, it is proposed that the stability and the mechanism of  $\beta$ -phase crystal formation is as follows. Because  $\beta$ -phase crystal is the polar crystal,  $\beta$ -phase is stabilized and formed in preference to  $\alpha$ -phase when the corona field exists during the deposition of PVDF film. Consequently, the content of  $\beta$ -phase increases with increasing the energy supplied to the substrate by the corona discharge. Under the conditions shown in the experimental section, the charged droplets of the PVDF solution were attracted onto the substrate and the PVDF film was formed by evaporation of the solvent and decomposition of precursor solution during substrate temperature field. PVDF polymer seems to have enough mobility to change the conformation

aligned along the applied field direction under the existence of the corona field during evaporation of the solvent. But if the corona field does not exist after deposition (as process I), a certain amount of energy is obtained to rearrange the PVDF molecules because the substrate temperature is high enough near/or over PVDF melting point 170°C. In contrast, when a the corona field exists during cooling down of the PVDF film to room temperature, the polar groups in PVDF film are “cooled” along the applied corona filed direction.

Page 16, third full paragraph, please rewrite the paragraph thereat as follows:

Figure 10 illustrates a third embodiment of a deposition apparatus. ~~In~~ In many respects, the apparatus of Figure 10 is similar to that of Figure 4, but for the addition of deflectors 210 under the control of a deflection controller 200 (components analogous to those in Figures 1 and 4 are similarly numbered in Figure 10, with the use in Figure 10 of a prime (') or double prime (") after the number).

Page 18, second paragraph, please rewrite the paragraph thereat as follows:

Figures 13 and 14 show the microstructures of YSZ nanopowders at different reaction temperatures. In the nanopowder formation process, the YSZ aerosol is produced by electrostatic assisted spray, and delivered into the reaction zone in a CVD reactor chamber, with the fine droplets of aerosol being converted into dry gel and pyrolyzing to form the nanopowders on the cold substrate under an appropriate low temperature. TEM micrographs reveal that the distribution of YSZ nanoparticles is uniform and the average size of YSZ powders deposited at 500°C is 10-20 nm (Figure 13). Under the high reaction temperature (e.g. 800°C), particle cluster aggregation occurs. TEM micrographs reveal that the distribution of YSZ nanoparticles is not uniform, and the YSZ particle size is in the range of 30-80 nm at high temperatures (Figure 14).